

BEFORE THE BOARD OF ENVIRONMENTAL REVIEW  
OF THE STATE OF MONTANA

In the matter of the ) NOTICE OF AMENDMENT,  
amendment, adoption and ) ADOPTION AND REPEAL  
repeal of rules in Title 17, )  
chapter 24, subchapters 3 )  
through 13 pertaining to the ) (STRIP MINING)  
Montana Strip and Underground)  
Mine Reclamation Act )

TO: All Concerned Persons

1. On April 22, 2004, the Board of Environmental Review published MAR Notice No. 17-210 regarding a notice of public hearing on the proposed amendment, adoption and repeal of the above-stated rules at page 777, 2004 Montana Administrative Register, issue number 8.

2. The Board has amended ARM 17.24.301 through 17.24.306, 17.24.312, 17.24.315, 17.24.321, 17.24.322, 17.24.324, 17.24.401, 17.24.404, 17.24.405, 17.24.412, 17.24.413, 17.24.416, 17.24.515, 17.24.520, 17.24.523, 17.24.601, 17.24.602, 17.24.603, 17.24.609, 17.24.623, 17.24.633, 17.24.636, 17.24.638, 17.24.645, 17.24.701 through 17.24.703, 17.24.711, 17.24.714, 17.24.716 through 17.24.718, 17.24.725, 17.24.751, 17.24.761, 17.24.762, 17.24.815, 17.24.823, 17.24.832, 17.24.901, 17.24.903, 17.24.911, 17.24.924, 17.24.927, 17.24.930, 17.24.932, 17.24.1001, 17.24.1002, 17.24.1003, 17.24.1017, 17.24.1104, 17.24.1106, 17.24.1108, 17.24.1116, 17.24.1125, 17.24.1129, 17.24.1131 through 17.24.1133, 17.24.1201, 17.24.1202, 17.24.1206, 17.24.1211, 17.24.1212, 17.24.1219, 17.24.1225, 17.24.1226, 17.24.1250, 17.24.1255, and 17.24.1263; adopted new rule I (17.24.764), and repealed ARM 17.24.323, 17.24.719, 17.24.720, 17.24.728, 17.24.730, 17.24.732, 17.24.733, and 17.24.824 through 17.24.826 exactly as proposed. The Board has amended ARM 17.24.308, 17.24.313, 17.24.427, 17.24.501, 17.24.522, 17.24.605, 17.24.624, 17.24.626, 17.24.634, 17.24.635, 17.24.639, 17.24.642, 17.24.646, 17.24.723, 17.24.724, 17.24.726, 17.24.821, 17.24.1018, 17.24.1109 and 17.24.1301 as proposed, but with the following changes, deleted matter interlined, new matter underlined:

17.24.308 OPERATIONS PLAN (1) Each application must contain a description of the operations proposed to be conducted during the life of the mine including, at a minimum, the following:

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(a) remains as proposed.

(b) a narrative, with appropriate cross sections, design drawings and other specifications sufficient to demonstrate compliance with ARM 17.24.609 and applicable rules of subchapter 10, explaining the construction, modification, use, maintenance, and removal of the following facilities (unless retention of such facilities is necessary for postmining land use as specified in ARM 17.24.762):

(i) through (vi) remain as proposed.

(vii) facilities or sites and associated access routes for environmental monitoring and data gathering facilities activities or facilities or sites and associated access routes used for the gathering of subsurface data by trenching, drilling, geophysical or other techniques to determine the nature, depth, and thickness of all known strata, overburden, and coal seams; and

(viii) through (f) remain as proposed.

17.24.313 RECLAMATION PLAN (1) Each reclamation plan must contain a description of the reclamation operations proposed, including the following information:

(a) through (d)(v) remain as proposed.

(e) ~~a drainage basin reclamation plan that demonstrates the feasibility of accomplishing postmining revegetation, land use and hydrologic requirements, and standards of ARM 17.24.634. This reclamation plan may be tailored to specific drainages or to classes of drainages, and may vary depending on but not limited to such factors as postmining land use, drainage basin size, flow characteristics, topographic position, and substrates;~~ a description of postmining drainage basin reclamation that ensures protection of the hydrologic balance, achievement of postmining land use performance standards, and prevention of material damage to the hydrologic balance in adjacent areas, including:

(i) a comparison of premining and postmining drainage basin size, drainage density, and drainage profiles as necessary to identify characteristics not distinguishable on the premining and postmining topographic maps;

(ii) a discussion of how, within drainage basins:

(A) the plan meets each performance standard in ARM 17.24.634(1);

(B) the requirements of 82-4-231(10)(k), MCA, and ARM 17.24.314 will be met where the postmining topography differs from the premining as allowed by ARM 17.24.301(13)(c);

(f) drainage channel designs appropriate for preventing material damage to the hydrologic balance in the adjacent area and to meet the performance standards of ARM 17.24.634(1), including:

(i) detailed drainage designs for channels that contain critical hydrologic, ecologic or land use functions not already addressed in this rule such as alluvial valley floors, wetlands, steep erosive upland drainages, drainages named on USGS topographic maps, or intermittent or perennial streams. Detailed drainage designs include fluvial and geomorphic characteristics pertinent to the specific drainages being addressed; and

(ii) for all other channels, typical designs and discussions of general fluvial and geomorphic habit, pattern, and other relevant functional characteristics;

(f) through (i) remain as proposed, but are renumbered (g) through (j).

17.24.427 CHANGE OF CONTRACTOR (1) The permittee shall notify the department of a proposed new contractor or any proposed change in a contractor responsible for day-to-day operations at a permit area. When such a change is proposed without transfer of the permit pursuant to ARM 17.24.418, the permittee shall submit the following to the department:

(a) through (2) remain as proposed.

17.24.501 GENERAL BACKFILLING AND GRADING REQUIREMENTS

(1) through (3)(b) remain as proposed.

(4) All final grading on the area of land affected must be to the approximate original contour of the land in accordance with 82-4-232(1), MCA.

(a) The operator shall transport, backfill, and compact to ensure compliance with ~~ARM 17.24.501(3)(b)~~ ARM 17.24.505, and (3)(b), and grade all spoil material as necessary to achieve the approximate original contour. Highwalls must be reduced or backfilled in compliance with ARM 17.24.515(1), or approved highwall reduction alternatives in compliance with ARM 17.24.515(2).

(b) through (7) remain as proposed.

17.24.522 PERMANENT CESSATION OF OPERATIONS (1) and (2) remain as proposed.

(3) Equipment needed for reclamation may not be removed from the mine until reclamation is complete.

17.24.605 HYDROLOGIC IMPACT OF ROADS AND RAILROAD LOOPS

(1) through (7)(c) remain as proposed.

(8) Drainage structures are required for stream channel crossings. Drainage structures must not affect the normal flow or gradient of the stream or adversely affect fish migration and aquatic habitat or related environmental values.

Riprap may be used for roads where an ephemeral channel is too shallow for placement of a culvert.

(9) remains as proposed.

17.24.624 SURFACE BLASTING REQUIREMENTS (1) through (13) remain as proposed.

(14) The maximum weight of explosives to be detonated within any eight-millisecond period may be determined by the formula  $W = (D/D_s)^2$  where  $W$  = the maximum weight of explosives, in pounds, that can be detonated in any eight-millisecond period;  $D$  = the distance, in feet, from the ~~nearest~~ blast hole nearest to ~~the nearest public building or structure, a dwelling, school, church, or public, commercial, community or institutional building or structures,~~ except as noted in (12); and  $D_s$  = the scaled distance factor, using the values identified in (11).

17.24.626 RECORDS OF BLASTING OPERATIONS (1) A record of each blast, including seismograph records, must be retained for at least three years and must be available for inspection by the department and the public on request. Blasting records must be complete and accurate at the time of inspection. The record must contain the following data:

(a) through (c) remain as proposed.

(d) direction and distance, in feet, from the ~~nearest~~ blast hole nearest to ~~the nearest a dwelling, school, church, or commercial, public, community, or institutional building or structure~~ either:

(i) through (t) remain as proposed.

17.24.634 RECLAMATION OF DRAINAGE BASINS

(1) Reclaimed drainage basins, including valleys, channels, and floodplains must be constructed to:

(a) through (g) remain as proposed.

(h) ~~achieve~~ are consistent with the approved postmining land use, and restore, enhance where practicable, or maintain natural riparian vegetation as necessary to comply with ARM subchapter 7; and

(i) and (2) remain as proposed.

17.24.635 GENERAL REQUIREMENTS FOR TEMPORARY AND PERMANENT DIVERSION OF OVERLAND FLOW, THROUGH FLOW, SHALLOW GROUND WATER FLOW, AND EPHEMERAL DRAINAGEWAYS, AND INTERMITTENT, AND PERENNIAL STREAMS (1) through (5) remain as proposed.

17.24.639 SEDIMENTATION PONDS AND OTHER TREATMENT FACILITIES

(1) Sedimentation ponds, either temporary or permanent, may be used individually or in series and must:

(a) through (d) remain as proposed.

(e) be constructed as approved unless modified under ARM 17.24.642(3)(7).

(2) through (6) remain as proposed.

(7) Sedimentation ponds ~~using~~ having embankments must be constructed to provide:

(a) a combination of ~~principle~~ principal and emergency spillways or a single spillway only to safely discharge the runoff from a 25-year, 24-hour precipitation event, or larger event specified by the department, assuming the impoundment is at full pool for spillway design. A single spillway must be constructed of non-erodible materials and designed to carry sustained flows, or be earth- or grass-lined and designed to carry short-term infrequent flows at non-erosive velocities where sustained flows are not expected. The elevation of the crest of the emergency spillway must be a minimum of one foot above the crest of the principal spillway. Emergency spillway grades and allowable velocities must be approved by the department;

(b) through (21)(b) remain as proposed.

(22)(a) All ponds with embankments must be designed and inspected regularly during construction under the supervision of, and certified after construction by, a qualified licensed professional engineer experienced in the construction of impoundments. After construction, inspections and certifications must be made and reports filed with the department, pursuant to ARM 17.24.642(4). Inspection and certification reports must be submitted until the embankments are removed.

(b) and (23) remain as proposed.

(24)(a) Sedimentation ponds and other treatment facilities must not be removed:

(a) through (c) remain as proposed, but are renumbered (i) through (iii).

(25) through (27) remain as proposed.

(28)(a) Excavations which are sediment control structures during or after the mining operation must have perimeter slopes that are stable. Where surface runoff enters the impoundment area, the sideslope must be protected against erosion. An excavated sediment pond requires no spillway and must be able to contain the 10-year, 24-hour precipitation event, and conform with (1), (2), (4), (6), (18), (22)(a), (24) and (27).

(b) remains as proposed.

17.24.642 PERMANENT IMPOUNDMENTS AND FLOOD CONTROL IMPOUNDMENTS

(1) Permanent impoundments are prohibited unless constructed in accordance with ARM 17.24.504 and 17.24.639, and have ~~emergency open-channel~~ spillways that will safely discharge runoff resulting from a 100-year, 24-hour precipitation event, assuming the impoundment is at full pool for spillway design, or larger event specified by the department. The department may approve a permanent impoundment upon the basis of a demonstration that:

(a) through (5)(a) remain as proposed.

(b) Flood control impoundments with embankments must be constructed in accordance with (1)(f) and ARM 17.24.639(7) through (21), and be inspected, maintained and certified according to (3), (4)(a), (4)(d) ~~(5)(a)~~, and ~~(5)(e)~~ (6) and ARM 17.24.639(22)~~(a) and (b)~~ and (23).

(c) through (c)(iii) remain as proposed.

(d) An initial pond certification report and inspections must be made for excavated flood control impoundments in accordance with ARM 17.24.639~~(27)~~(28)(b). If the volume of the flood control impoundment is used in determination of required volume for a downstream pond, annual certification reports are required in accordance with ~~(5)(a), (5)(b), (5)(c), and (5)(e)~~ (4)(a), (4)(c), and (4)(d).

(e) Prior to construction, ~~Flood~~ flood control impoundments must be approved ~~prior to construction~~ by the department.

(6) and (7) remain as proposed.

17.24.646 SURFACE WATER MONITORING (1) through (3) remain as proposed.

(4) After disturbed areas have been regraded and stabilized according to ARM 17.24.501, the operator shall monitor surface water flow and quality. Data from this monitoring must be used to determine whether the quality and quantity of runoff without treatment is consistent with the requirements of this rule to minimize disturbance to the prevailing hydrologic balance, to demonstrate that the drainage basin has stabilized to its previous, undisturbed state, and to attain the approved postmining land use. These data must also be used by the department to review requests for removal of water quality or flow control systems and for bond release. With department approval, other information or methods, such as models, may be used, in conjunction with monitoring data, for these purposes.

(5) through (7) remain as proposed.

17.24.723 MONITORING (1) The operator shall conduct periodic vegetation, soils, and wildlife monitoring under

plans submitted pursuant to ARM 17.24.312(1)(d), 17.24.313(1)(f)(iv), and 17.24.313(1)(g)~~(iii)~~(ix) and the approved postmining land use as approved by the department.

(2) through (4) remain as proposed.

17.24.724 REVEGETATION SUCCESS CRITERIA (1) Success of revegetation must be determined by comparison with unmined reference areas or by comparison with technical standards. Reference areas and standards must be representative of vegetation and related site characteristics occurring on lands exhibiting good ecological integrity. The department must approve the reference areas, technical standards, and methods of comparison.

(2) through (3)(c) remain as proposed.

17.24.726 VEGETATION MEASUREMENTS (1) and (2) remain as proposed.

(3) The revegetated areas must meet the performance standards in (1) and (2) for at least two of the last four years of the phase III bond period. ~~The performance standards must also be met~~ Pursuant to ARM 17.24.1113(1), the department shall evaluate the vegetation at the time of the bond release inspection, ~~pursuant to ARM 17.24.1113(1) for phase III to confirm the findings of the quantitative data.~~

(4) remains as proposed.

17.24.821 ALTERNATIVE POSTMINING LAND USES: SUBMISSION OF PLAN (1) through (1)(c) remain as proposed.

(2) Each application for alternative postmining land use is subject to public review requirements of subchapter 4 either as part of a new application or as an application for a major revision. However, in its notice of application to government entities pursuant to ARM 17.24.401, the department shall allow 60 days for submission of comments from authorities having jurisdiction over land use policies and plans, and from appropriate state and federal fish and wildlife agencies ~~pursuant to ARM 17.24.824(1)(f).~~

17.24.1018 NOTICE OF INTENT TO PROSPECT (1) through (8) remain as proposed.

(9) All provisions of this subchapter, except ARM 17.24.1001(1), (2)(j), (k), ~~(p)~~, and (q), (3), (4), and (5), 17.24.1003, 17.24.1014, 17.24.1016, and 17.24.1017, apply to a prospecting operation for which a permit is not required pursuant to ARM 17.24.1001.

17.24.1109 BONDING: LETTERS OF CREDIT (1) Letters of credit are subject to the following conditions:

(a) through (d) remain as proposed.

(e) Using the balance sheet referenced in (1)(d) and a certified income and revenue sheet, the bank must meet the three following criteria:

(i) and (ii) remain as proposed.

(iii) capital or stockholders' equity must be at least 5.5% of total assets  $((\text{total stockholders equity [shareholders equity + capital surplus + retained earnings]}) / \text{total assets} = 0.055 \text{ or more})$ .

(f) and (g) remain as proposed.

(h) The department may not accept letters of credit from a bank for any person, on all permits held by that person, in excess of three times the company's maximum single obligation ~~as provided in (1)(d)~~.

(i) through (j)(iii) remain as proposed.

17.24.1301 MODIFICATION OF EXISTING PERMITS: ISSUANCE OF REVISIONS AND PERMITS (1) Within one year of [the effective date of this rule amendment], each operator and each test pit prospector shall submit to the department an application for all permit revisions necessary to bring the permit and operations conducted thereunder into compliance with subchapters ~~5~~ 3 through ~~10~~ 12 as they read on [the effective date of this rule amendment].

(2) and (3) remain as proposed.

3. The following comments were received and appear with the Board's responses:

COMMENT NO. 1: The following problems or issues are evident in the proposed definition of approximate original contour (AOC) at ARM 17.24.301(13): a) changing the orientation of a drainage is major with unpredictable consequences; b) the exceptions in part (c) of the definition make the assumption that "ephemeral drainageways" are short and small, which they are not in many cases in eastern Montana, and this change allows for great latitude to change the postmining topography; c) there are no sideboards for control of this issue in the proposed definition nor in ARM 17.24.634; and d) with regard to (d) of the definition, does AOC determine postmining land use or vice versa?

RESPONSE: The proposed amendment defining AOC incorporates verbatim the definition of the term enacted in HB 373. The Board has no authority to modify the definition of a term enacted by the Legislature.

COMMENT NO. 2: Montana has been represented as having a good permitting program, requiring cross-sections, premining  
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topography maps, and maps keyed to cross-sections showing the postmining topography (PMT) to be met at final bond release. I am surprised that the proposed amendment to ARM 17.24.301(13) and elsewhere implies that this information does not exist in the Montana program. Also, since the Board is only now proposing a requirement in ARM 17.24.305(1)(j) for permit applications to include premining topography maps, how have the Department and the operators been determining AOC all of these past years?

RESPONSE: The definition of AOC, set forth in ARM 17.24.301(13) does not include any requirements for cross-sections or maps. The requirements for PMT maps and cross-sections are currently found in ARM 17.24.313(3) and in the proposed amendment to ARM 17.24.313(1)(d). Premining topography maps have been submitted by operators for many years at the request of the Department because, as the commentor implies, these maps are required to determine AOC.

COMMENT NO. 3: Protection of the hydrologic balance must not be tied to postmining land use. Water is too precious to be tied to anything other than what was there previous to disturbance. Montana's rules must comply with SMCRA which requires restoration of the hydrologic balance regardless of postmining land use.

RESPONSE: The proposed amendments to ARM 17.24.301(13)(c), (54), and (67) reflect enactment of HB 373 requiring the minimization of disturbances to the prevailing hydrologic balance at the mine site as necessary to support postmining land use. See 82-4-231(10)(k). If the Office of Surface Mining determines that the provisions of MSUMRA that are reflected in these amendments do not comply with SMCRA, MSUMRA and the amended rules would need to be revised accordingly.

COMMENT NO. 4: The proposed definition of "diversion" in ARM 17.24.301(33) is more narrow than the federal and the current state definitions. The proposed definition would remove supervision in the construction of diversions. Would all efforts to move water on a disturbed area then be an "ephemeral drainageway" rather than a diversion?

RESPONSE: The current federal and state definitions do not incorporate the concept of supervision in the definition. The proposed amendment to the definition of "diversion" would not result in the loss of oversight regarding the construction and maintenance of these features. The proposed amendment defines "diversion" to mean a channel, embankment, or other manmade structure constructed to divert undisturbed runoff around an area of disturbance and back to an undisturbed

channel. This definition does not exclude the possibility that the diversion itself could be located on an area of disturbance. A diversion is distinguishable from an "ephemeral drainageway." An ephemeral drainageway is a feature to be constructed as part of the postmine topography and does not have the purpose of diverting undisturbed runoff around an area of disturbance. The design and construction of all diversions must be certified by a licensed professional engineer under ARM 17.24.635(5).

COMMENT NO. 5: The proposed amendments do not set sideboards for the reclamation of ephemeral drainageways. The amendment to ARM 17.24.301(38) defining "ephemeral drainageway" should be clarified regarding the area of land covered, otherwise it may lead to reclamation that is far removed from the concept of approximate original contour. Other provisions in the rule package deal with drainage basins one mile square in relation to ephemeral streams. In addition, implementation of the definition of "ephemeral drainageway" may become very subjective. Finally, the proposed amendment deletes "channel bottom" from the definition of "ephemeral drainageway." Almost all ephemeral streams have channel bottoms that should be reconstructed. A channel bottom is the difference between a drainage constructed by nature and an empty irrigation ditch.

RESPONSE: The proposed amendment defining "ephemeral drainageways" in ARM 17.24.301(38) incorporates verbatim the definition of the term in 82-4-203(17), MCA. The Board has no authority to modify the definition of a term enacted by the Legislature. The only rule provisions that refer to "one square mile of land" are ARM 17.24.636(1) and (2)(a) that address temporary diversions. Amendments in this rule package propose to delete these provisions. The Board does not believe that omission of "channel bottom" from the definition will significantly affect reclamation of ephemeral drainageways. Specific requirements for drainage basin designs, including ephemeral drainageways, are set forth in ARM 17.24.313(1)(e) and (f). In addition, ARM 17.24.634 set forth performance standards for drainage basins, retaining most of the current standards. Subjectivity will be limited by these requirements and performance standards.

COMMENT NO. 6: In regard to the amendment to the definition of the phrase "historically used for cropland" in ARM 17.24.301(53), there seems to be no justification in replacing "5" with the word "five" while leaving "10" as is in (a) and (b). Furthermore, the addition of (c) allows land that was not actually used for cropland to be considered

"historically used for cropland" if it would likely have been used as cropland except for the existence of specified conditions. This amounts to historical fiction and makes more land eligible for farming.

RESPONSE: The convention for numerals in administrative rules is established by the Secretary of State's office and requires numbers one through nine to be spelled out while numbers 10 and greater are to be represented numerically. The definition proposed by the Board is identical to the definition adopted by OSM in 30 CFR 701.5. Therefore, the Board is adopting the rule as proposed.

COMMENT NO. 7: The federal program requires changes in the postmining land use to be treated as a major revision. State rules need to make this requirement clear to mine operators. The federal regulation does not define "major revision" and delegates to state programs the authority to determine which revisions must meet notice, public participation and notice of decision requirements.

RESPONSE: In the current rules, a proposed change in postmining land use constitutes a major revision under ARM 17.24.301(63). Although this provision is not amended in this rule package, it is renumbered ARM 17.24.301(65).

COMMENT NO. 8: What is meant by the word "dedicated" in the definition of "fish and wildlife habitat" in ARM 17.24.301(64)(h)? All other definitions of land use say "land used for".

RESPONSE: "Dedicated" and "land used for" are synonymous in this context. The slightly revised definition in the rules is a quotation of that now found in MSUMRA, and both of these are identical to the OSM definition in 30 CFR 701.5. The Legislature chose to use the OSM definition.

COMMENT NO. 9: Maintaining "as determined by premining inventories" in the definition of "reference area" in ARM 17.24.301(103) would be a good idea. It seems like using premining inventories is a reasonable approach to locating reference areas.

RESPONSE: The amended definition of "reference area" in ARM 17.24.301(103) incorporates verbatim the definition in 82-4-203(44). The Board has no authority to modify the definition of a term enacted by the Legislature. Premining inventories, however, will still need to be used to identify reference areas that are representative of vegetation and related site characteristics occurring on lands exhibiting good ecological integrity pursuant to ARM 17.24.724(1).

COMMENT NO. 10: In the proposed amendment to ARM 17.24.302(1), the term "current" should be defined in light of the BMPII situation.

RESPONSE: The BMPII situation was transfer of a permit under 82-4-250, MCA. That statute provides for the transfer of a revoked permit and further provides that the Department cannot require new information unless it can show significant changes in baseline condition. A definition of "current" in the rules would not supersede 82-4-250, MCA.

COMMENT NO. 11: The proposed amendments renumbering ARM 17.24.303, 17.24.304, 17.24.308, 17.24.313, 17.24.626, and 17.24.1106 are unnecessary and inappropriate. If there is only one main heading (such as in these rules), it is inappropriate to put a (1) in front of it and subsequently renumber the rest of the rule.

RESPONSE: The proposed amendments conform the rules to formatting requirements established by the Secretary of State's office.

COMMENT NO. 12: The proposed amendment to ARM 17.24.304(1)(i)(ii) deletes the requirement that an applicant set forth information on range trends in an application for an operating permit. The amendment to ARM 17.24.304(1)(1), however, requires an application to indicate historic land use and vegetation of the proposed permit area, which necessarily includes a discussion of range trends.

RESPONSE: The requirement that an application for a permit contain information on range trends was deleted from ARM 17.24.304(1)(i)(ii) because management by range sites, including the use of range trends, is no longer a conventionally accepted method. However, if the proposed permit area was historically rangeland, it may be appropriate to include a discussion of range trends in the information on historic use and vegetation required by ARM 17.24.304(1)(1).

COMMENT NO. 13: ARM 17.24.308(1)(b)(vii) should also require an application to contain a description of sites and associated access routes for environmental monitoring and data gathering.

RESPONSE: The Board agrees that all disturbances associated with environmental monitoring and data gathering should be described in the application and has amended the rule to require applications to contain the additional information.

COMMENT NO. 14: The amendment to ARM 17.24.313(1)(d) and 17.24.634 should expressly require the postmine topographical map to depict postmining drainage basins.

RESPONSE: The postmine topographical map required under ARM 17.24.313(1)(d) is a contour map, depicting elevations and surface configuration by means of contour lines. The contour lines themselves show where drainage channels and drainage divides are to be located in the reclaimed landscape. Therefore, expressly delineating the outline of drainage basins on the postmine topographic map is not necessary. While always implicitly required in practice, the postmining topographic map and approximate original contour requirements are expressly set forth in the amendment to ARM 17.24.634 to provide a complete list of the substantive requirements for reclaiming drainage basins.

COMMENT NO. 15: Proposed text in ARM 17.24.313(1)(e) on drainage basin reclamation plan requirements is vague and confusing and not quite consistent with the requirements in the Act that were adopted with passage of HB 373. The vagueness might result in subjective interpretation of these requirements by DEQ program staff, inconsistent application of the requirements, and permit application approval delays. The commentor suggested replacement of the proposed language with the following:

17.24.313 RECLAMATION PLAN (1) Each reclamation plan must contain a description of the reclamation operations proposed, including the following information:

(e) a description of postmining drainage basin reclamation that ensures protection of the hydrologic balance, achievement of postmining land use performance standards, and prevention of material damage to the hydrologic balance in adjacent areas including:

(i) a comparison of pre- and postmining drainage basin size, drainage density, and drainage profiles as necessary to identify characteristics not distinguishable on the postmining topographic map;

(ii) a discussion, within drainage basins, of:

(A) how the plan meets each performance standard in ARM 17.24.634(1);

(B) requirements of 82-4-231(10)(k) and ARM 17.24.314 where the postmining topography differs from the premine as allowed by ARM 17.24.301(13)(c); and

(f) drainage channel designs appropriate for preventing material damage to the hydrologic balance in the adjacent area and to meet the performance standards of ARM 17.24.634(1) including:

- (i) typical designs and/or discussions of general fluvial and geomorphic habit or characteristic pattern; or
- (ii) detailed drainage designs for channels that contain critical hydrologic, ecologic or land use functions not already addressed in this rule such as alluvial valley floors, wetlands, steep erosive upland drainages, drainages named on USGS Quad maps, and intermittent or perennial streams. Detailed drainage designs include fluvial and geomorphic characteristics pertinent to the specific drainages being addressed.

RESPONSE: The Board agrees with the suggested replacement text with some additional changes. "Premining and" needs to be added before "postmining" in ARM 17.24.313(1)(e)(i) for grammatical correctness. For clarity, ARM 17.24.313(e)(ii) will be reworded as shown above. In (1)(e)(ii)(B), "hydrologic function" will be replaced with "the requirements of 82-4-231(10)(k), MCA, and ARM 17.24.314 will be met" to specify the statutory provisions relevant to hydrologic function. In (1)(f), the order of (i) and (ii) will be reversed and the phrase "for all other channels" will be added to the beginning of new (1)(f)(ii) for clarity. In new (1)(f)(ii), the phrase "and other relevant functional characteristics" will be added to cover other channel attributes that may need to be considered. A few other miscellaneous changes have been made for consistent or improved wording or grammatical correctness. All of this has been included in the amended rule as shown above.

COMMENT NO. 16: Adoption of the Montana Department of Environmental Quality's proposed reclamation and reporting standards for drainages is needed.

RESPONSE: The Board interprets this to mean that the commentor supports the proposed amendment to ARM 17.24.313(1)(e) and 17.24.634 regarding drainage reclamation. While the Board appreciates the inferred support, the Board is significantly revising the original proposed amendment of ARM 17.24.313(1)(e) as discussed above. ARM 17.24.634 is amended as proposed.

COMMENT NO. 17: The proposed amendment in ARM 17.24.313(1)(e) on drainage basin reclamation plan requirements is non-site-specific and may result in a cookie cutter approach to ephemeral drainageway reclamation planning. This new provision will require much more pre-planning and, therefore, more staff time at the permit application stage, where there is pressure to process permits quickly. I am wondering how well some of these plans will hold up when they

are implemented 20 or 30 years later. The rationale for placing stream planning process later in the mining and reclamation process (i.e., as currently written in ARM 17.24.634) was probably due to the thought that a more realistic assessment could be done at a later time.

RESPONSE: As discussed in the Response to Comment No. 21, the Board is adopting revised text for ARM 17.24.313. The amendment as revised will require more work at the permit application stage. However, the Board does not anticipate it will be burdensome to the point that it will require more staff to implement. It is quite likely that certain plans for drainage basin and channel reclamation, which are not scheduled for implementation for many years, will be amended, just as PMT and revegetation plans have historically been amended over time. It is anticipated that some operators may request to delay submitting detailed designs, where required, for drainages that will not be disturbed or reclaimed for many years. This could be accomplished with a permit stipulation.

Therefore, while there is good reason to allow delay of detailed designs for some drainages, it is important that the Department obtain an appropriate level of information on drainage basin reclamation at the front end to facilitate review of the overall reclamation plan.

COMMENT NO. 18: The amendment to ARM 17.24.313(3)(e) deletes the requirement that a reclamation plan contain a plan for the early detection of grading problems. Why is a plan for early detection of grading problems not a good idea? Although providing notification to the Department of grading problems has been inserted into ARM 17.24.501(7), having a plan in the permit would call the operator's attention to the fact that this is its responsibility.

RESPONSE: Practice has proven that there is no feasible way to formulate specific plans for the early detection of grading problems. It is more straightforward and appropriate to treat this as a performance standard, which is what is being required in the amendment to ARM 17.24.501(7).

COMMENT NO. 19: The rule amendment to ARM 17.24.323 would allow livestock grazing of reclaimed areas to become voluntary instead of mandatory. This is problematic because grazing is beneficial in facilitating the incorporation of dead plant material into the soil, improving soil quality and maintaining plant diversity on reclaimed lands. Required grazing of reclaimed areas also can allow ranchers in the Colstrip area to benefit by resting their lands while their livestock graze reclaimed lands. This can be important in

periods of drought, which may allow a rancher to avoid reducing his herd.

RESPONSE: The Board agrees with the general sentiments expressed about the benefits of grazing. However, grazing should be a discretionary management tool used by mine operators to achieve the approved revegetation and postmining land use results. Implementation and management of grazing within a mine permit area should be the responsibility of the operator. If the operator fails to appropriately use grazing, the desired/approved revegetation land use results will probably not be obtained and Phase III bond release will not be realized. Despite the proposed elimination of ARM 17.24.323, the Board believes that considerable grazing will still take place on lands reclaimed to grazing land and pastureland. Regarding the benefits to some ranchers of the availability of reclaimed lands for grazing of their livestock, this is not a matter over which the Board has any authority or jurisdiction. Based on the expectation that considerable grazing will still occur under the proposed amendments, however, the Board would expect that substantial areas of reclaimed lands would still be available for the benefit of ranchers.

COMMENT NO. 20: In ARM 17.24.427(1), "a" should be inserted before "contractor responsible" for grammatical correctness.

RESPONSE: The Board agrees with the comment and has amended the rule accordingly.

COMMENT NO. 21 In ARM 17.24.501(4)(a), an "and" needs to be inserted before "compact" for grammatical correctness. The rule unnecessarily references both ARM 17.24.501(3) and (3)(b).

RESPONSE: The Board agrees with the comment and has amended the rule accordingly.

COMMENT NO. 22: The deletion of (3) under ARM 17.24.522 provides an open-ended time frame for reclamation to be completed. Paying for final reclamation upon mine closure is like paying for a dead horse; all of the profit is gone and there is nothing but expense. With no time frames to complete final reclamation, this can drag on and on. Ninety days may be too short, but certainly some time frame should exist as an incentive to finish the job. The provision to keep reclamation equipment on site until reclamation is completed should be retained.

RESPONSE: The ninety-day time frame for backfilling and grading provided for in ARM 17.24.522(3) is inconsistent with



ARM 17.24.501(6)(b), which requires backfilling and grading to be completed within two years after coal removal has been completed. Deletion of the ninety-day provision in ARM 17.24.522(3) and retention of the two-year provision in ARM 17.24.501(6)(b) provides a realistic period for completion of backfilling and grading. Thus, the period of completion of the backfilling and grading requirements is not open-ended.

Although ARM 17.24.501(1) requires retention of equipment on site that is necessary for backfilling and grading, a provision proposed to be deleted in the amendment of ARM 17.24.522(3) is more broad, requiring retention of all equipment that is necessary to complete reclamation. The Board agrees with the commentor that this provision should not be deleted and has revised the amendment accordingly.

COMMENT NO. 23: The amendments to ARM 17.24.501 do not address the situation at the Rosebud Mine, where little coal has been removed from one of the pits. The Department has not determined that these operations are completed nor is reclamation in those pits proceeding under ARM 17.24.501.

RESPONSE: The commentor's statement does not address the substance of ARM 17.24.501 and, therefore, is outside the scope of this rulemaking procedure. The Board invites the commentor to contact the Department's coal program to discuss the matter.

COMMENT NO. 24: Regarding the amendment to ARM 17.24.602(1), how would an inspector know where the road and railroad were to be located if they are not marked on the site prior to the pre-inspection?

RESPONSE: The inspectors would use the mine plan and premining topography maps to locate the sites of proposed roads or railroad loops.

COMMENT NO. 25: With regard to the proposed amendment to ARM 17.24.605(8), would riprap used in an ephemeral channel for construction of a railroad act as a dam to flow in the channel?

RESPONSE: The Board agrees with this comment and will revise the amendment by inserting the phrase "for roads" after "Riprap may be used." This revision will confine the use of riprap to roads only, where there is adequate flexibility in the construction of roads to avoid the damming of ephemeral channels.

COMMENT NO. 26: The coal rules must continue to observe at least a one-mile blasting radius.

RESPONSE: The proposed amendment of ARM 17.24.623(2), requires copies of blasting schedules to be distributed to local governments, public utilities, and residences within 1/2 mile of the permit area rather than within one mile of the permit area as currently required. Blasting does not normally impact areas more than 1/2 mile away, and therefore the purpose of this rule would not be served by continuing to send blasting schedules to agencies or residences beyond 1/2 mile from the permit area. The amendment has, therefore, been adopted as proposed.

COMMENT NO. 27: The amendment to ARM 17.24.623(5)(b) deletes the requirement that blasting areas be reasonably compact and not larger than 300 acres. Deletion of these requirements would contribute to the wasting of coal by prematurely exposing it to weathering.

RESPONSE: The purpose of ARM 17.24.623(5)(b) is not to limit the area that an operator may blast at one time and the current language of that rule provision does not contain such a restriction. Rather, the purpose of ARM 17.24.623(5)(b) is to provide a method for providing public notice of blasting activities. The current requirement that the public notice must identify a blasting area that is reasonably compact and is not larger than 300 acres has resulted in public notices containing lengthy and complicated legal descriptions. Removing the 300-acre restriction simplifies the legal description which makes it easier to understand.

COMMENT NO. 28: ARM 17.24.624(14) should be amended to make it consistent with the proposed amendments to ARM 17.24.624(6)(a), (7)(a), and (11).

RESPONSE: The Board agrees with the comment and has amended the rule accordingly.

COMMENT NO. 29: ARM 17.24.626(1)(d) should be amended to make it consistent with the proposed amendments to ARM 17.24.624(6)(a), (7)(a), and (11).

RESPONSE: The Board agrees with the comment and has amended the rule accordingly.

COMMENT NO. 30: State rules need to include objective hydrologic balance tests for bond release. There are 3-D computer model programs such as the USGS's MODFLOW ground water modeling program which could be used for this purpose. Application of modeling to reclaimed surface and ground water systems in conjunction with monitoring data could be used to test field performance necessary for bond release.

RESPONSE: Section 82-4-231(10)(k) sets forth specific requirements with which an operator must comply to protect the hydrologic balance at the mine site and adjacent areas. These requirements address acid mine drainage, contributions of sediment to streamflow or runoff outside the permit area, removal of siltation structures following successful reclamation, restoration of the recharge capacity, avoidance of channel deepening, preservation of the hydrologic functions of the alluvial floor, and construction of intermittent and perennial stream channels. The Board has adopted rules implementing these criteria in ARM 17.24.631 through 17.24.652.

COMMENT NO. 31: The proposed amendment to ARM 17.24.633(2) conflicts with SMCRA by tying water quality to postmining land use. Postmining land use cannot be used to allow impairment of the hydrologic balance.

RESPONSE: The proposed amendment to ARM 17.24.633(2) does not include "hydrologic balance" or "water quality" in the text, and thus, does not tie postmining land use to these terms. However, there is a tie between hydrologic balance and postmine land use in the proposed rule amendments to ARM 17.24.301(13)(c), (54), and (67). These proposed amendments reiterate statutory provisions enacted in HB 373. See 82-4-231(10)(k). If OSM determines that these statutory provisions do not comply with SMCRA, the rule provisions incorporating the statutory language will have to be amended accordingly.

COMMENT NO. 32: The proposed amendment to ARM 17.24.634 does not seem to give much consideration to reclaiming drainage basins to their approximate original contour. Rather, achievement of the postmining land use seems to be the controlling factor, an approach that seems to conflict with SMCRA. Additionally, engineering and channel layout requirements, including the submission of a design based on sound geomorphic and engineering principles prior to reclamation of the drainage basin, have been largely deleted from ARM 17.24.634 and have not been reinserted by the proposed amendment to ARM 17.24.313(1)(e). Finally, the proposed amendment to ARM 17.24.634 deletes the requirement that the average gradient of a reclaimed channel exhibit a concave longitudinal profile.

RESPONSE: The proposed amendments to ARM 17.24.634 retain the requirement that reclaimed drainage basins (including channels) be constructed to the approximate original contour. Subsection (1)(a) requires drainage basins to be constructed in compliance with the approved postmining topographic map which, under 82-4-222(1)(o)(iii), must depict

projected elevations of primary drainageways and associated drainage divides and generalized slopes with the level of detail appropriate to project the approximate original contour. Additionally, (1)(b) of ARM 17.24.634 specifically requires drainage basins to be constructed to the approximate original contour. The requirements in (1)(h) and (i) that the reclaimed drainages restore a diversity of habitats that achieve the approved postmine land use and exhibit dimensions and characteristics that will accommodate the postmine land use does not negate the approximate original contour requirement.

SMCRA and the federal regulations implementing SMCRA do not have provisions directly addressing the reclamation of drainage basins that would serve as a counterpart to ARM 17.24.634. The basic principal in SMCRA that would govern reclamation of drainage basins is protection of the hydrologic balance on the mine site and in adjacent areas. This principal is reflected in the amendments to ARM 17.24.634 by the reference to 82-4-231(10)(k) in (1)(c).

The design requirements for reclaimed channels that had been set forth in ARM 17.24.634(2) have been restated and are included in ARM 17.24.313(1)(e). As asserted by the commentor, ARM 17.24.313(1)(e) does not specifically require the designs to be based on sound geomorphic and engineering principles. However, ARM 17.24.313(1)(e) and (f) and 17.24.634 include text regarding designs or construction to fluvial and geomorphic habit, characteristic pattern, and other relevant functional characteristics. The only specifically missing standard is designing to "sound engineering principles." The Board believes that this requirement is implicit and does not need to be specifically stated. There is a level of engineering that is assumed to apply to many aspects of reclamation but is not specifically required in the applicable rules (Operations Plan, ARM 17.24.308; Reclamation Plan, ARM 17.24.313; General Backfilling and Grading Requirements, ARM 17.24.501; Cut and Fill Terraces, ARM 17.24.502; Disposal of Offsite-Generated Waste and Fly Ash, ARM 17.24.510; Highwall Reduction, ARM 17.24.515; and Other Support Facilities, ARM 17.24.609). The proposed amendment to ARM 17.24.634 retains the requirement that a reclaimed channel exhibit a concave longitudinal profile. The requirement is set forth in (1)(g).

Finally, the Board does not agree that the requirements of this rule are subordinate to the postmining land use. "Postmining land use" has been inserted in (1)(h) and (i). However, the Board does believe that the text in (1)(h) needs to be modified to more accurately relate the establishment or restoration of a diversity of habitats to the postmining land

use. Therefore, "achieve" will be replaced with "are consistent with."

COMMENT NO. 33: In ARM 17.24.634(1)(e), the proposed amendment to "six-hour precipitation event" should be revised to "6-hour precipitation event". According to Shipley's Style Guide, Writing in the World of Work, 1990, page 153, numerals are to be used for any number expressing measurements.

RESPONSE: The Secretary of State's formatting standards require that the numbers one through nine be spelled out and the numbers 10 and above be set out numerically. The Board complies with this requirement and is adopting the language as proposed.

COMMENT NO. 34: In regard to ARM 17.24.634(1)(f), how far afield will the Department go to find an "unmined landscape", 100 miles, 10 miles, or lands adjacent to the mine?

RESPONSE: The amendment to ARM 17.24.634(1)(f) requires reclamation of drainage basins to a condition that is comparable to an unmined landscape with similar climate, topography, vegetation and land use. Because the unmined landscape must have similar climate, topography, vegetation and land use, it is anticipated that the "unmined landscape" used as a reference will be in the general vicinity of the mine site.

COMMENT NO. 35: Should the title of ARM 17.24.635 be revised to recognize that the term "ephemeral stream" has been changed to "ephemeral drainageway" in ARM 17.24.301(38)?

RESPONSE: The Board agrees with the comment and has amended the rule accordingly.

COMMENT NO. 36: In ARM 17.24.639(1)(e), the rule reference needs to be corrected to ARM 17.24.642(7).

RESPONSE: The reference is intended to be to the portion of ARM 17.24.642 that deals with review of modifications, which is (2). The Board agrees with the suggested change and has amended the rule accordingly.

COMMENT NO. 37: In ARM 17.24.639(7), a more grammatically correct and clearer term for the word "using" in "using embankments" would be "having."

RESPONSE: The Board agrees with the comment and has amended the rule accordingly.

COMMENT NO. 38: In ARM 17.24.639(7)(a), the proposed change from "principal" to "principle" regarding spillways is grammatically incorrect. "Principal" is the correct word

because it means main or primary, which is the context of the word here.

RESPONSE: The Board agrees with the comment and has amended the rule accordingly.

COMMENT NO. 39: In ARM 17.24.639(28)(a), the proposed amendment includes rule section references. Section (22) needs to be added to make this list of references complete.

RESPONSE: The Board agrees with the comment and has amended the rule to include the suggested cross-reference.

COMMENT NO. 40: I interpret ARM 17.24.642 to mean that permanent impoundments cannot have a combination of principal and emergency spillways? The only spillway that could safely pass the flood standard would be an open grassed or riprapped spillway. For safety reasons, debris in a flood must be considered in the design of permanent pond spillways.

RESPONSE: ARM 17.24.642 does not preclude a permanent impoundment from having a principal and emergency spillway. The salient requirement is that a permanent impoundment have a spillway (referred to as an emergency spillway in the rules) that is able to safely pass the 100-year, 24-hour design event. Such a spillway would be sufficient if it were the impoundment's only spillway. The impoundment, however, may also have a "principal" spillway designed under ARM 17.24.639(7). Nevertheless, the Board believes that the use of the term "emergency spillways" in the proposed amendment of ARM 17.24.642(1) is confusing. Thus, the word "emergency" has been deleted from the proposed amendment.

Flood debris is considered in the design of all impoundments, permanent or temporary, under ARM 17.24.639(3).

The Board agrees that all permanent impoundments must have open-channel spillways and has revised the rule amendment accordingly.

COMMENT NO. 41: The proposed amendment to ARM 17.24.642(1)(i) deletes safety factor requirements that were applicable to permanent impoundments.

RESPONSE: Although ARM 17.24.642(1)(i) has been deleted, permanent impoundments remain subject to safety factor requirements. Pursuant to ARM 17.24.642(2), permanent impoundments must meet the design and performance requirements of ARM 17.24.639, including minimum seismic and static safety factors required under (16).

COMMENT NO. 42: In ARM 17.24.642(5)(b), the cross referenced rules need to be revised to reflect the proposed rule amendments. Subsections (4)(a), (4)(d) and (6) need to

be added, (5)(a) and (5)(c) need to be deleted, and (22) needs to be added in line 5.

RESPONSE: The Board agrees that certification reports for flood control impoundments with embankments need to only include the statements required under (4)(a) and (4)(d). Instead of adding (4)(a) and (4)(d) to the referenced rules as suggested by the commentor, however, the Board has replaced the reference to (4) with references to (4)(a) and (4)(d). The Board agrees that the inspection requirements set forth in (6) should apply to flood control impoundments with embankments and has amended the rule accordingly. The Board further agrees that (5)(a) should be deleted because it does not contain inspection, maintenance and certification report requirements and that (5)(c) should be deleted because the requirements for excavated flood control impoundments are not applicable to flood control impoundments with embankments. The Board has amended the rule accordingly. Finally, the Board disagrees that a reference to (22) needs to be added. A reference to a rule provision includes all subsections under that rule provision. Therefore, the Board has deleted the references to ARM 17.24.639(22)(a) and (b).

COMMENT NO. 43: In ARM 17.24.642(5)(d), the cross reference to ARM 17.24.639(27)(b) needs to be corrected to ARM 17.24.639(28)(b) and the cross-references at the end of the provision should be corrected to (4)(a), (4)(c) and (4)(d).

RESPONSE: Pursuant to the adoption of this rule package, ARM 17.24.639(27)(b) is being renumbered ARM 17.24.639(28)(b). Furthermore, the statements required to be set forth in certification reports under (4)(a), (4)(c) and (4)(d) should be included in certification reports for excavated flood control impoundments addressed in ARM 17.24.642(5)(d). The Board, therefore, agrees with the comment and has amended the rule accordingly.

COMMENT NO. 44: The proposed amendment to ARM 17.24.642(5)(e) incorrectly implies that the Department is constructing the flood control impoundments.

RESPONSE: The Board agrees with the comment and has reworded the amendment accordingly.

COMMENT NO. 45: ARM 17.24.646(4) should be amended to clarify that the Department's review is of requests for the removal of water quality or flow control systems.

RESPONSE: The Board agrees with the comment and has amended the rule accordingly.

COMMENT NO. 46: The proposed amendment to ARM 17.24.711 should include vegetation standards for each new land use sanctioned by HB 373.

RESPONSE: The proposed amendment to ARM 17.24.711 incorporates verbatim the vegetation standards set forth in 82-4-233, MCA, for the postmine land uses in which vegetation plays an integral role. The proposed amendment to ARM 17.24.726 also provides additional and supplementary standards.

The reference in the comment to "each new land use sanctioned by HB 373" implies that the Montana program has not previously recognized any of the alternative land uses. This is incorrect. All of the land uses now listed in MSUMRA have been recognized in the Montana rules since 1980. HB 373 has removed some of the major restrictions in the selection of postmining land use that were originally in place.

COMMENT NO. 47: The difference between the vegetation standards for pastureland and grazing land is not clear. Pastureland can be either irrigated or dryland. Some introduced pastureland species would be undesirable in a dryland situation (e.g. cheat grass and smooth brome do not produce well in a dryland situation but are very persistent).

Standards for determining what species are appropriate for the various postmining land uses should be set forth. Using a case-by-case approach in each permit gives opportunities for manipulation and drifting away from SMCRA standards.

RESPONSE: In enacting HB 373, the Legislature established the same vegetation criteria for lands reclaimed for the postmine land uses of grazing and pastureland. The general applicable vegetation standards are set forth in 82-4-233(1) and (2), MCA. The vegetation criteria specifically applicable to lands reclaimed to pastureland or grazing land are set forth in 82-4-233(3)(b), MCA, and require the reestablished vegetation to have use for grazing by domestic livestock at least comparable to premining conditions or enhanced when practicable. These vegetation standards for pastureland and grazing land have been incorporated verbatim in the administrative rules in the proposed amendment to ARM 17.24.711. The acceptability of species for reclamation to pastureland are evaluated under 82-4-232(8), MCA, and ARM 17.24.762, 17.24.821 and 17.24.823. The Department has historically developed recommendations regarding species that are appropriate for grazing and pastureland.

COMMENT NO. 48: Section 515(b)(19) of SMCRA reads: "...establish on the regarded areas, and all other lands affected, a diverse, effective, and permanent vegetative cover of the same seasonal variety native to the area of land to be



affected and capable of self-regeneration and plant succession at least equal in extent of cover to the natural vegetation of the area; except, that introduced species may be used in the revegetation process where desirable and necessary to achieve the approved postmining land use plan." It is clear that SMCRA states a preference for the use of native species, and the use of introduced species is to be an exception, not having equal status as the conjunctive clause in ARM 17.24.711(1)(b) would indicate.

RESPONSE: The proposed amendment to ARM 17.24.711(1)(b) reflects enactment of HB 373 and is essentially identical to 30 CFR 816.111(a)(2). Thus, the use of introduced species relative to native species is the same in the proposed Montana rules and OSM regulations.

COMMENT NO. 49: I think that ARM 17.24.711(1)(d) will not be approved because SMCRA requires soil erosion to be controlled with the best available technology.

RESPONSE: The proposed amendment to ARM 17.24.711(1)(d) reflects enactment of HB 373, which inserted this language in 82-4-233(1)(d), MCA. The Board has no authority to adopt a rule that is inconsistent with this statute. If the Office of Surface Mining disapproves the provision of HB 373 reflected in the amendment to ARM 17.24.711(1)(d), the Board will be required to amend the rule accordingly.

COMMENT NO. 50: In reference to ARM 17.24.711(3), what does "programmatic basis" mean?

RESPONSE: This means determining specifications for cover, planting, and stocking of vegetation on a broad, program-wide basis that can then be applied to various site-specific circumstances.

COMMENT NO. 51: Who will determine and how will the appropriate stocking rates for fish and wildlife habitat be determined? Does use for grazing land at least comparable to premining conditions include having trees available on reclamation for livestock to escape heel flies in hot weather?

RESPONSE: The Department will determine appropriate stocking rates for fish and wildlife habitat after consultation and with the approval of the Department of Fish, Wildlife and Parks, pursuant to ARM 17.24.711(3)(a). Stocking rates will be determined on the basis of the requirements of ARM 17.24.313(1)(g), 17.24.717, 17.24.726 with reference to selection of reference areas or technical standards for the revegetation types involved and ARM 17.24.751. If it was appropriate in any site-specific situation, trees on grazing

land for cattle shade or insect-escape purposes could be included.

COMMENT NO. 52: The deleted text in ARM 17.24.714 removes a required practice (applying mulch and cover crops as soon as possible) that some operators may use automatically, but others may not. This plainly tells operators what is expected of them.

RESPONSE: While the proposed amendment to ARM 17.24.714 retains the requirement that operators use practices such as seedbed preparation, mulching or cover cropping on regraded and resoiled areas, it is unnecessary to state that these practices be employed as soon as practical in the Department's experience. If the operator fails to implement these practices as soon as practical and impacts result, such as erosion or sedimentation, the Department can require the operator to take corrective action.

COMMENT NO. 53: In reference to the amendment to ARM 17.24.716(1), if productivity levels recover promptly, should that not lead to more rapid bond release? Vegetation establishment is not the same as productivity level. It appears that productivity levels are not germane to cropland.

RESPONSE: The amendment to ARM 17.24.716(1) is deleting the reference to production levels because production level standards are addressed elsewhere. Thus, while the Board agrees that production level recovery affects bond release and that vegetation establishment is not the same as production levels, this does not provide a basis for retaining the reference to production levels in ARM 17.24.716(1). Productivity levels are relevant in determining the success of reclamation to the postmine land use of cropland. Section 82-4-235(1)(a), MCA, and ARM 17.24.726(2) provide standards for evaluating the success of reclamation to cropland based on productivity. While it is important to promptly establish vegetation to control erosion with species that are necessary for the postmining land use, productivity itself is not specifically targeted for assessment until Phase III bond release, which occurs a minimum of 10 years after final seeding.

COMMENT NO. 54: In ARM 17.24.718, what happens if normal husbandry practices are ineffective in establishing vegetation consistent with the approved reclamation plan?

RESPONSE: If normal husbandry practices do not work in a given situation, the operator would need to use measures such as landscape reconfiguration or reseeding/replanting that

would restart the responsibility period to get the desired result.

COMMENT NO. 55: In ARM 17.24.723(1), the reference to ARM 17.24.313(1)(g)(iii) needs to be corrected to ARM 17.24.313(1)(g)(ix).

RESPONSE: The Board agrees with the comment because (ix) is the provision that requires a plan for monitoring and has amended the rule accordingly.

COMMENT NO. 56: The proposed amendment to ARM 17.24.723(3) requires the operator to develop corrective measures when vegetation is not being successfully established without requiring the operator to inform the Department of the corrective measures. The Department will be the judge of the operator's effectiveness in complying with the permit, and can assist the operator in moving in the right direction regarding the establishment of vegetation.

RESPONSE: The Department will be informed of any corrective measures that operators implement in the annual reports filed pursuant to ARM 17.24.1129. The Department also will be made aware of the corrective measures in the course of regular inspections of the mines during which operators often ask for Departmental input and advice on a variety of issues. Thus, the Department will be informed and involved, but without a defined formal process.

COMMENT NO. 57: Given the potential for cropland to be an alternative postmine land use under the amendment adding new Rule I, what are the tests to determine the required productivity levels of cropland?

RESPONSE: Pursuant to 82-4-235(1)(a), MCA, for areas reclaimed for use as cropland, crop production must be at least equal to that achieved prior to mining based on comparison with historical data, comparable reference areas or United States Department of Agriculture publications applicable to the areas of the operations, as referenced in rules adopted by the Board. ARM 17.24.724 governs the use of reference areas and technical standards (including use of historical data and data contained in federal publications). ARM 17.24.726(2) provides that production is considered to meet the required standard if it is equal to 90% of the standard with 90% statistical confidence, using an appropriate one-tail test with a 10% alpha error.

COMMENT NO. 58: ARM 17.24.724(2) inappropriately deletes the word "unmined" before "reference area".

RESPONSE: The Board agrees and the rule has been amended accordingly.

COMMENT NO. 59: The federal program requires reclaimed vegetation to pass normative and objective productivity tests. The normative test for cropland productivity is bushels or tons per acre and for native range and planted pasture is animal unit months grazed. Measurement of water and nutrient cycling, energy flow, and biotic community are also normative productivity tests in wide use today. State rules must provide for objective reclamation vegetation productivity standards for bond release.

RESPONSE: Productivity standards for cropland, grazing land, and pastureland are found in the proposed amendment to ARM 17.24.726 which incorporates the standards set forth in 82-4-235(1), MCA. These standards are equivalent to federal standards set forth in 30 CFR 816.116(b). Neither the OSM rules nor state rules include (or propose to include) animal unit months, nutrient cycling, energy flow, or biotic community measurements in the form of a standard.

COMMENT NO. 60: Any changes that HB 373 and the proposed rules allow would be governed by 82-4-232(8), MCA. Therefore, in most cases, cropland, pastureland, recreational, residential, commercial, industrial, etc. will not have any particular vegetation standards, if existing permits are amended to "higher or better uses".

RESPONSE: The assertion that there are no vegetation standards for the state list of land uses is incorrect. These are covered in 82-4-233 and 82-4-235, MCA, and ARM 17.24.726.

COMMENT NO. 61: ARM 17.24.726(3) would require vegetation sampling in two of the last four years of the Phase III bonding period. It also would require that the performance standards be met at the time of the Phase III bond release inspection. If the bond release inspection were delayed for a year or two from the last sampling date, there is concern that DEQ would require further quantitative sampling at the time of the bond release inspection to verify that the standards were still being met. Thus, the last sentence in ARM 17.24.726(3) is proposed to be amended as follows: "Pursuant to ARM 17.24.1113(1), the department shall evaluate the reclamation at the time of the bond release inspection to confirm the findings of the quantitative data."

RESPONSE: The Board agrees with the comment and has amended the rule accordingly. The Board has also clarified that the bond release inspection is for Phase III.

COMMENT NO. 62: With regard to ARM 17.24.726(3), does the operator have any responsibility for vegetation during Phase IV bond release? Is there a place here for minimal standards for field and lab methods to be used in permits so that all mines have a level playing field that is readily ascertainable?

RESPONSE: The operator would have responsibility for vegetation in Phase IV bond release only insofar as ARM 17.24.1116(6)(d)(i), as amended, requires all lands within any designated drainage basin to have been reclaimed in accordance with Phase I, II, and III requirements before the drainage basin is eligible for Phase IV bond release. In regard to minimal standards for field and lab methods, ARM 17.24.302(2) requires all tests, analyses, surveys and data collection to be performed or certified by a qualified person using scientifically valid techniques. However, as provided in (1), the operator may propose other methods and the Department will approve them if they provide an acceptable method of measurement. This provides flexibility for operators. Pursuant to (2), the Department has historically developed recommendations regarding acceptable field and laboratory methods.

COMMENT NO. 63: One of the rules requiring 51% native species to meet SMCRA standards is being changed. ARM 17.24.728 also is slated for repeal and it barely meets SMCRA standards as it is.

RESPONSE: The only rules that contain the 51% native species standard are ARM 17.24.726 and 17.24.728. The proposed amendment to ARM 17.24.726 and the repeal of ARM 17.24.728 implements the enactment of HB 373, providing for the less restrictive use of introduced species and no longer requiring the vegetation to be predominantly native species. Neither SMCRA nor the federal regulations have a 51% native species standard.

COMMENT NO. 64: Because of the variableness of nature, the only reasonable standards for revegetation would be to compare it to similar vegetation on nearby land. These reference areas must not be stricken from the rules.

RESPONSE: Reference areas are not being stricken from the rules. Under the proposed rule amendments, the use of reference areas is required in ARM 17.24.724(1).

COMMENT NO. 65: The federal program disallows "impractical" alternative land uses. State rules need to include an impracticality assessment on any plans to reclaim

lands to industrial parks or residential use instead of agriculture.

RESPONSE: Section 82-4-232(8)(a)(iii) is virtually identical to 30 CFR 816.133(c)(3)(i) and requires an alternative land use to be not impracticable or unreasonable.

The proposed rule amendments to ARM 17.24.821 and 17.24.823 that address alternative postmining land uses include references to this provision of MSUMRA and also require a demonstration that the proposed alternative land uses are feasible. A demonstration of feasibility must be shown for all proposed alternative land uses, including agriculture reclamation such as cropland or pastureland.

COMMENT NO. 66: How are revegetated areas to be managed when the approved postmining land use is commercial, industrial, residential, or recreational?

RESPONSE: There is no requirement in MSUMRA or SMCRA for "management" of vegetation associated with these land uses other than to manage the vegetation to support the postmining land use, to control erosion, and to achieve vegetation comparable to reference areas if reference areas are used. If these were proposed as alternative land uses, then any management plans might be included or suggested case-by-case as a result of review and evaluation under the requirements of 82-4-232(8), MCA, and ARM 17.24.821 and 17.24.823.

COMMENT NO. 67: In ARM 17.24.821(2), the reference to ARM 17.24.824(1)(f) needs to be deleted because that rule is proposed for repeal.

RESPONSE: The Board agrees with the comment and has amended the rule accordingly.

COMMENT NO. 68: The provisions of ARM 17.24.821(2) and 17.24.1301(2) appear to be in conflict regarding whether proposed land use changes are major or minor revisions. It looks like ARM 17.24.1302 is an effort to evade the public review requirements for land use changes that would occur if viewed as major revisions.

RESPONSE: ARM 17.24.301(65)(b) and 17.24.821(2) indicate that proposed postmining land use changes are major revisions subject to public review requirements. ARM 17.24.1301(2) indicates that permit revisions required to bring permits into compliance with the rules as amended are minor revisions. A proposed revision changing the approved postmine land use would not be made for the purpose of bringing the permit into compliance with the amended rules and, therefore, is not governed by ARM 17.24.1301.

COMMENT NO. 69: The provision in the amendment to ARM 17.24.823(1)(c) that allows appropriate letters of commitment from parties other than the operator to demonstrate the feasibility of alternative land use plans is a good idea. The state should also have a letter of release from the operator and/or the ultimate landowner indicating that the state is absolved of responsibility if the alternative land use is unsuccessful. If the state issues final bond release, the state is warranting that the reclaimed land has successfully met the standards of the prescribed land use.

RESPONSE: The commentor correctly states that the Department issues bond release based on a determination that the reclaimed land has successfully met the standards of the prescribed land use, which would include grazing land and cropland. More broadly, the Department may only issue final bond release if MSUMRA and the administrative rules adopted under MSUMRA have been met. Assuming that the Department has followed all of the required procedures and has evaluated the reclaimed land in accordance with all of the applicable standards and requirements, there is no need to obtain a letter of release from the operator and/or landowner.

COMMENT NO. 70: It is entirely possible that alternative land uses may fail. ARM 17.24.825, the rule that New Rule I replaces, had "fall-back" provisions to address a failure to achieve production standards for cropland. The proposed addition of New Rule I makes no provision for such a failure.

RESPONSE: The Board agrees that an operator may fail to achieve the required standard for an alternative postmine land use such as cropland or grazing land. In that event, a remedy is available to the Department under the amendment to ARM 17.24.1202. Section (4) of that rule allows the Department to order the operator to immediately investigate and determine the cause of a failure to establish successful reclamation and to submit an investigative report to the Department with a prescribed course of corrective action. Furthermore, the Department retains an operator's reclamation bond until the bond release standards are met. If they are not met and the operator defaults on its obligations, the Department revokes the bond and completes reclamation.

COMMENT NO. 71: In ARM 17.24.1018(9), the proposed addition of "(p)" to the list of provisions that do not apply to operations under this rule is erroneous. ARM 17.24.1001(2)(p) requires proposed post disturbance land use to be set forth in an application for a permit. Specification of the proposed post disturbance land use needs to be included in an application for a notice of intent.

RESPONSE: The Board agrees with the comment and has deleted the reference to ARM 17.24.1001(2)(p).

COMMENT NO. 72: In ARM 17.24.1109(1)(e)(iii), a set of parentheses must be added to enclose "(total stockholders equity ... or more)".

RESPONSE: The Board agrees with the comment and has amended the rule accordingly.

COMMENT NO. 73: In ARM 17.24.1109(1)(h), the term "as provided by" should be changed to "consistent with".

RESPONSE: The Board agrees that the phrase "as provided in (1)(d)" is confusing, but does not believe that replacing the phrase with "consistent with (1)(d)" adds clarity. ARM 17.24.1109(1)(h) contains a stand-alone requirement for letters of credit. Therefore, the Board has amended the proposed rule to delete the reference to (1)(d).

COMMENT NO. 74: I think ARM 17.24.1116(6)(b)(iii) will run into problems similar to ARM 17.24.633 regarding making erosion and water quality dependent upon postmining land use.

RESPONSE: This provision does not make a connection between erosion and water quality and postmining land use. "Erosion" and "water quality" are not found in this provision, and the term "postmining land use" is stated as an independent factor among many listed in this provision.

COMMENT NO. 75: The internal catchphrases proposed for deletion in the amendment to ARM 17.24.1212 provide a fast and efficient way to find topics under this rule.

RESPONSE: The internal catchphrases are being deleted from the rule to meet Secretary of State formatting standards.

COMMENT NO. 76: In ARM 17.24.1301(1), the phrase "subchapters 5 through 10" needs to be revised to "subchapters 3 through 12" to include rule amendments in all subchapters that may be pertinent to the requirement in (1) to revise permits, and also to be consistent with the subchapters 3 through 12 requirement in (3) of this rule.

RESPONSE: The Board agrees with the comment and has amended the rule accordingly.

COMMENT NO. 77: The Montana rules must not include less stringent requirements than the federal Surface Mining Control and Reclamation Act.

RESPONSE: The Board agrees with the comment. Many of the proposed amendments reflect the enactment of HB 373 by the 2003 Montana Legislature. If the Office of Surface Mining



disapproves any of the changes to state law enacted by HB 373 that have been reflected in the proposed rule amendments, the Board will be required to make additional amendments to the rules.

COMMENT NO. 78: Reclamation should be based on sound science and specifically stated high standards. Reclamation should promote best management practices. Water is so important in our arid region. Coal companies must be required to reclaim and restore disturbed waterways and wetlands to the highest standards. By setting high standards, mining companies, the public and state agencies know what is expected. By retaining high standards, our land, water, wildlife, and agricultural economy will be preserved, while at the same time we can responsibly develop our state's natural resources.

RESPONSE: The Legislature has set reclamation standards for coal mines through enactment and subsequent amendment of the Montana Strip and Underground Mine Reclamation Act (MSUMRA). The Board is charged with adopting rules that implement these reclamation standards. Ultimately, MSUMRA and the rules adopted under MSUMRA must be at least as stringent as federal law.

COMMENT NO. 79: Alternative land uses, while possibly appropriate, should be specifically spelled out and defined.

RESPONSE: The phrase "alternative land use" does not need to be defined by administrative rule because the concept is adequately addressed by statute. Section 82-4-232(8)(a), MCA, allows an operator to propose a "higher or better use" as an alternative postmining land use. Section 82-4-203(23), MCA, defines "higher or better uses" as "postmining land uses that have a higher economic value or non-economic benefit to the landowner or the community than the premining land uses."

Potential alternative land uses could be any of the land uses defined in MSUMRA, including cropland (82-4-203(13)), developed water resources (82-4-203(16)), fish and wildlife habitat (82-4-203(20)), forestry (82-4-203(21)), grazing land (82-4-203(22)), industrial or commercial (82-4-203(26)), pastureland (82-4-203(37)), recreation (82-4-203(43)), or residential (82-4-203(46)).

COMMENT NO. 80: Grazing standards must be included in the rules.

RESPONSE: The standard for reclaiming disturbed areas for pastureland or grazing land is set forth in statute. Section 82-4-233(3), MCA, provides that the reestablished vegetation for pastureland or grazing land must have use for

grazing by domestic livestock at least comparable to premining conditions or enhanced when practicable. Section 82-4-235(1)(b) provides that the extent of ground cover and production of living plants on areas reclaimed for use as pastureland or grazing land must be at least equal to that of a reference area or other standard approved by the Department as appropriate for the postmining land use. Finally, the proposed amendment to ARM 17.24.724 indicates that comparison of the vegetation of reclaimed areas to the appropriate standard must be based on equivalent management of the reclaimed areas and the reference area or lands from which an appropriate standard is derived; such management would include grazing for grazing land and pasture land.

COMMENT NO. 81: Many of the suggested amendments to the rules are formulas that are geared to process rather than results and would, at best, get good results on a sometimes basis. Process is no substitute for standards.

RESPONSE: The Board disagrees that the proposed amendments do not provide sufficient standards with which to judge the success of reclamation. The amended rules would continue to provide standards for backfilling and grading (ARM 17.24.501), highwall reduction (ARM 17.24.515), drainage basins (ARM 17.24.634), soils (ARM 17.24.701 and 17.24.702), vegetation (ARM 17.24.711, 17.24.716, 17.24.717, 17.24.724 and 17.24.726) and wildlife (ARM 17.24.751).

COMMENT NO. 82: Since the provisions of HB 373 are still under review by OSM, this rulemaking is premature. Some of the provisions of HB 373 are not in compliance with SMCRA, one of the more important being whether postmining land use should determine how the water resource is reclaimed. I do not think that OSM will look favorably on reclamation as a mere process to release bond automatically after grading, topsoiling, and seeding. I think we will be back here again reviewing new changes in the law and rules.

RESPONSE: HB 373 became effective January 1, 2004. As of that date, rule provisions that are inconsistent with HB 373 were superseded. The Board has determined that it would not be appropriate for the Board to not implement an Act of the Legislature in anticipation of OSM disapproval, which may or may not occur. Therefore, the Board made the decision in 2004 to go forward with rulemaking prior to conclusion of OSM's review of HB 373. IF OSM disapproves provisions of HB 373, the commentor is correct that MSUMRA and the rules adopted under MSUMRA will probably be subject to additional amendments.

COMMENT NO. 83: Grazing/wildlife uses have been the predominant premining uses at the existing mines. Is it fair to say that all other uses will be regarded as higher or better uses?

RESPONSE: If the premining land use on a parcel was grazing land/wildlife habitat and an operator wanted to reclaim that parcel to an alternative use, the operator would have to demonstrate the alternative use was "higher or better" as that term is defined in MSUMRA. See 82-4-203(23), MCA. However, the reverse is also true. If the premining land use was cropland and the operator wanted to reclaim it to grazing land and/or wildlife habitat, the operator would have to demonstrate that grazing land and/or wildlife habitat was "higher or better" as defined in MSUMRA.

Reviewed by:

BOARD OF ENVIRONMENTAL REVIEW

_____	By:	_____
JOHN F. NORTH		JOSEPH W. RUSSELL, M.P.H.
Rule Reviewer		Chairman

Certified to the Secretary of State, \_\_\_\_\_, 2004.